



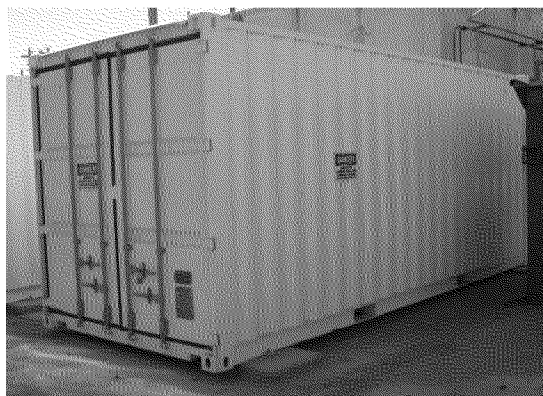
## **Transportation and Disposal Regulations for Chrysotile Asbestos used at Chlor-Alkali Facilities EPA-HQ-OPPT-2016-0736**

This document provides additional information on existing federal Department of Transportation (DOT), Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) and Occupational Safety & Health Administration (OSHA) regulations that govern the transportation and disposal of asbestos-containing waste to and from chlor-alkali facilities.

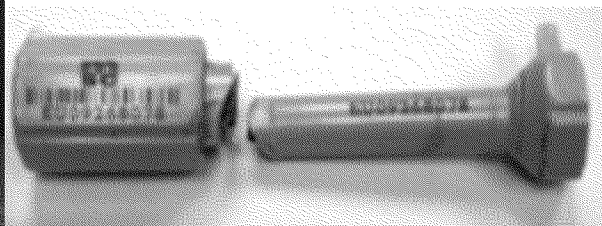
### **Federal Regulations that Govern Transportation to Chlor-Alkali Facilities**

Chrysotile asbestos is shipped to the United States in 40 kilogram commercial grade plastic bags. Typically, pallets are received with twenty (20) bags on each pallet. The pallet is covered completely in a heavyweight plastic wrap; it is very durable and similar in thickness to a drum liner. The pallets are received in a shipping container that is sealed and protected from accidental or purposeful opening with a heavy duty bolt-type car seal. The bolt-type car seal can only be removed using a substantial cutting tool like a bolt cutter or similar device. At the port of entry, the container is removed from the ship and placed on the dock. The shipping container is not opened at the port and material is not transloaded to a different container or conveyance. Closed freight containers may only be unloaded by the consignee. (49 CFR § 173.216(b)(2).)

The Federal Department of Transportation (DOT) imposes specific shipping, packaging and labeling requirements on asbestos as a hazardous material : 49 CFR Parts 171 (general shipping requirements) ; 172 (marking and labeling requirements) ; and 173 (asbestos packaging requirements). For asbestos transportation, 49 CFR § 173.216 requires leak-tight, rigid packaging and/or non-rigid packaging in closed freight containers. The shipping container is marked per DOT requirements and is transported to a chlor-alkali facility where the pallets and bags are removed.



Shipping Container



Bolt-Type Car Seal for the shipping container

### Material Delivery at the Site

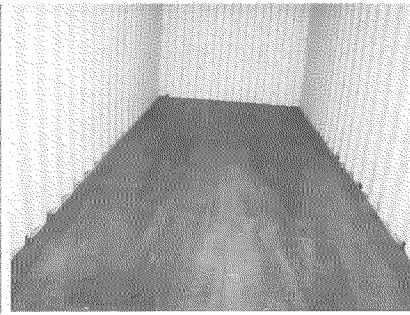
Upon delivery to a chlor-alkali facility, the chrysotile asbestos shipping container is inspected before unloading. Personal Protective Equipment (PPE) is used during the inspection; the process is subject to the OSHA asbestos standard. (29 CFR § 1910.1001.) As with the entire handling experience, strict adherence to process, procedures and housekeeping is followed for container inspection. Once the container has been opened, pallets and bags are inspected. If broken bags or loose chrysotile asbestos is evident, the area is controlled to prevent accidental exposure, the bags are repaired, and the area is barricaded and treated as an area requiring immediate cleanup.



Container Upon Opening



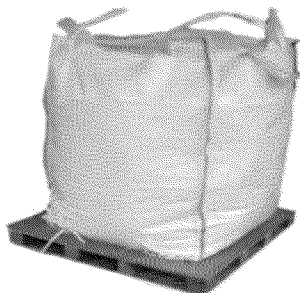
Container Partially Unloaded



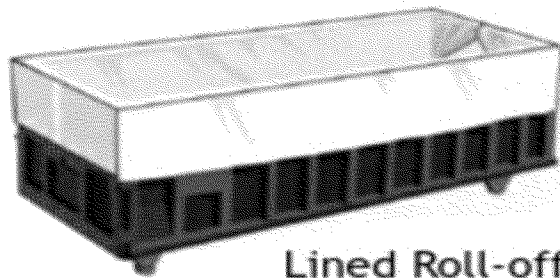
Empty Clean Container

### Federal Regulations imposed upon the Management of Asbestos-Containing Wastes

The chrysotile asbestos waste is wet, non-friable asbestos when an operator removes the material from a diaphragm using wet methods as required by EPA's NESHAP regulations. (40 CFR § 61.150(a).) Although not always the case, the chrysotile asbestos may be separated from the diaphragm using hydro blasting water. PPE is used during the disposal process and the process is subject to the OSHA asbestos standard. (29 CFR § 1910.1001.) All waste containers, bags, and potentially contaminated clothing are placed in a labeled, plastic-lined impervious container. (40 CFR § 61.150(a)(1)(iii).)



Bulk Bag



Lined Roll-off Dumpster

EPA's NESHAP and OSHA regulations impose specific labeling requirements on asbestos containing waste material. (40 CFR § 61.150(a)(1)(iv), citing 29 CFR § 1910.1001(j)(4) and 40 CFR § 61.150(d)). DOT

regulations referenced above also apply to asbestos containing materials as hazardous material wastes. States may impose additional regulations for disposal of asbestos-containing material.

Federal regulations impose coverage, dust suppression, and recordkeeping requirements for a landfill to be approved for disposal of asbestos-containing waste in compliance with federal NESHAP regulations (40 CFR § 61.154). The federal NESHAP also imposes additional controls on inactive landfills that accept asbestos-containing materials (40 CFR § 61.151).

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